ZyXEL

# The Gigabit Nerve Center with Metro Mind and Muscle

- 12/4 Auto MDI/MDI-X 100/1000 Mbps Ports Compliant with IEEE 802.3u/x/ad on MGS-3712
- 4/12 1000 Mbps SFP Open Slot Compliant with IEEE 802.3x/ab on MGS-3712F
- 16K Layer 2 MAC Address Table
- Supports 1 MB On-chip Packet Buffer
- Authentication and Accounting by RADIUS/TACACS+
- Overheat Detection
- IEEE 802.3ah OAM

**Metro Layer 2 Gigabit Managed Ethernet Switch**

**MGS-3712**
**MGS-3712F**

## Benefits

### Connect with Metro Ethernet Power

The ZyXEL MGS-3712 and MGS-3712F L2 Gigabit Ethernet switches offer Layer 2 switching capability in a smart enclosure. With non-blocking 24 Gbps switching fabric, the MGS-3712 and MGS-3712F feature 8 GbE copper ports (8 port GbE SFP on MGS-3712F) and 4 dual-personality GbE (GbE SFP + 1000BASE-T) ports.

As a well-known technology for decades, Ethernet interfaces are much less expensive than SDH or PDH interfaces of the same bandwidth. Ethernet also supports high bandwidths with fine granularity which is not available on traditional SDH connections.

Another distinct advantage of an Ethernet-based access network is the easy connectivity to the customer network, thanks to its prevalent use on corporate and, more recently, residential networks. Bringing Ethernet to the Metropolitan Area Network (MAN) discovers many advantages to both service providers as well as corporate and residential customers.

### Secure Multi-Service Delivery

The ZyXEL MGS-3712 and MGS-3712F also come with advanced L2/L3/L4 features, high-performance hardware platform, robust security, Quality of Service (QoS) and management features to deliver intelligent connectivity to essential business applications. Incorporating new features such as VLAN Stacking (also known as VLAN Tunneling) and VLAN Translation, it is possible to isolate the customer traffics from each other or the internal core network signaling traffic.

### Advance Design with Metro in Mind

On MGS-3712 and MGS-3712F, the "Front Access" outdoor cabinet design for easy wiring and maintenance has been added to meet Metro Ethernet demands; and flexible power source choices like AC/DC dual-input also relieves customer of outlet constraints. In addition, the PWM control fan module not only reduces the noise, but also extends MTBF and improves reliability. External alarm input/output block connects mechanical cabinet parts to the management network, while the operation temperature and high humidity protection allows the network to spread more extensively.

# Specifications

## Standard Compliance
- IEEE 802.3 10BASE-T Ethernet
- IEEE 802.3u 100BASE-TX Ethernet
- IEEE 802.ab 1000BASE-T Ethernet
- IEEE 802.ah 1000BASE-BX10-U Ethernet
- IEEE 802.ah 1000BASE-BX10-D Ethernet
- IEEE 802.3z
- IEEE 802.3x Flow control
- IEEE 802.1D Spanning tree protocol
- IEEE 802.1w Rapid Spanning tree protocol
- IEEE 802.1s Multiple Spanning tree protocol
- IEEE 802.1p Class of service, priority protocols
- IEEE 802.1Q VLAN tagging
- IEEE 802.1x Port Authentication
- IEEE 802.3ad LACP aggregation

## Performance
- Wire-speed throughput
- 1488000 pps for 1000BASE-T, 64 byte packet
- Non-blocking 24 Gbps switching fabric in MGS-3712 and MGS-3712F

## MAC and Packet Buffer
- 16K MAC entries
- 1 MB on Chip Packet Buffer

## Traffic Management and QoS
- 802.1p with 8 CoS per port
- SPQ/WRR/WFQ
- Port based rate limiting
- Policy based rate limiting
- Port based traffic shaping
- Rule-based bandwidth control
- Port-based egress traffic shaping
- Rule-based traffic mirroring
- IGMP snooping (IGMP v1/v2/v3)
- TRTCM

## Link Aggregation
- IEEE 802.3ad LACP link aggregation compliant
- Support static manually port trunking
- Up to 6 aggregation groups, 8 ports/per group randomly selected

## Resilient Network
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- BPS (Backup Power System)

## User Security and Authentication
- Static MAC Filtering
- Limiting MAC number per port
- 802.1x Authentication
- Port based VLAN
- 802.1Q VLAN
- SSH
- SSL
- Wire speed filtering per MAC/IP/TCP/UDP
- Wire speed rate limiting per MAC/IP/TCP/UDP
- Wire speed mirroring per MAC/IP/TCP/UDP

## Management
- iStacking™: Embedded web-based interface
- Cisco like Command Line Interface via telnet or local console
- Text-based configuration profile for massive deployment
- Support standard Web-based browser
- SNMP v2c, v3 manageable
- RMON for system and performance monitoring
- Telnet
- Out-of -band MGMT Port
- F/w upgrade, configuration backup/restore via ftp
- Alarm led indicator for early warning of hardware troubles
- Send system trap to trap server
- IEEE 802.1ag CFM*
- Selective QinQ*

## Intelligent ACL (L2/L3/L4 Access List Control)
- Based on Port
- Based on MAC+VLAN ID
- Based on IP Address (Source/Destination)
- Based on L3 Protocol category
- Based on TCP/UDP port number

## Hardware Specifications
- 8 1000BASE-T/8 GbE SFP
- 4-port dual personality GbE (GbE SFP + 1000BASE-T)
- Auto-negotiation
- Auto-MDIX
- Compliant with IEEE 802.3/3u
- Back pressure flow control for half duplex
- Flow control for full duplex (IEEE 802.3x)
- Connector: RJ-45/GbE SFP

## Physical Specifications
**MGS-3712**
- Dimensions: 438 (W) x 215 (D) x 44.45 (H) mm
- Weight: 3.4 Kg

**MGS-3712F**
- Dimensions: 438 (W) x 215 (D) x 44.45 (H) mm
- Weight: 3.4 Kg

## Environmental Specifications
- Operating temperature: 0ºC ~ 65ºC
- Storage temperature: 10ºC ~ 70ºC
- Humidity: 10% ~ 99% (non-condensing)

## Certification
- UL 60950-1
- CSA 60950-1
- EN 60950-1
- IEC 60950-1
- FCC Part15 (Class A)
- CE EMC (Class A)

**: Firmware upgradeable for future enhancement.*

For more product information, visit us on the web at www.ZyXEL.com

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65-100-016601B 03/08